

during his academic life. The following are some of the branches of the work in the personal division: (i) Provisions for maintaining the health of the normal, healthy student by means of proper exercises, etc.; (ii) protection of the physically sound student from communicable diseases that are constantly creeping into the university, by the early detection and isolation of all cases of communicable disease—tuberculosis, typhoid fever, smallpox, scarlet fever, mumps, measles, etc.; (iii) provisions for the care and treatment of all such cases of communicable diseases; (iv) reconstruction-reclamation; correction of defects, advice and treatment to all subnormals; (v) advice to and treatment of all ill students. (b) Division of Sanitation: The students' environment must be made as hygienic as possible; hence this division concerns itself with the sanitary conditions affecting the student both on and off the campus. (c) Education: Finally, every student in the university must be made familiar with the elements of personal and public hygiene. Education in these important matters is carried on by means of courses in these subjects, daily bulletins, exhibits and lectures.

Determination of Bacteriotropic Content of Antimeningococcic Serum.—EVANS (*Public Health Reports*, No. 43, xxxiv, 2375) suggests that inasmuch as the pathology of cerebrospinal meningitis indicates that the bacteriopins are concerned in the defense of the body against the meningococcus, the determination of the content of these antibodies in therapeutic serums should be of more value than the estimation of agglutinins and complement-fixing antibodies. A grouping of meningococci in accordance with bacteriropic determinations is given, and it is shown that there is a fair correlation of these groups and the groups established by agglutination reactions. The content of the various antibodies in different serums does not always run parallel, and the same is to be said with respect to the loss of antibodies through the operation of unfavorable influences. The test is regarded as a valuable one for the testing of commercial serums.

Field Experiments in Malaria Control.—ROSE (*Jour. Am. Med. Assn.*, 1919, lxxiii, 1414) states that for the average town in our Southern States having a thousand or more inhabitants and a reasonably high infection rate, malaria control by antimosquito measures is economically feasible; it is, in fact, a sound business investment. In heavily infected regions, in which the cost of mosquito control would be prohibitive, the amount of malaria may be greatly reduced by resort to screening, to immunizing quinin, or to destroying the parasites in the blood of the human carriers. The indications would seem, in fact, to justify the hope that by the systematic application of these measures the malaria in a community may be held within reasonable bounds, and that this result may be accomplished within limits of cost that the average community may well afford. The people in these communities are prepared to provide the funds by public taxation for malaria control when they have been shown by demonstration that the program proposed will accomplish definite results that justify the expenditure. The results thus far accomplished would seem to justify continuing these field experiments until the principal procedures that have been found useful in controlling malaria have been pretty thor-

oughly tested separately and thus evaluated. It will then be possible to operate intelligently a combination program in which each control measure will be given its place and will receive varying emphasis from time to time according to the local conditions that have to be met. This freedom in the use of our tools will in turn contribute toward the object that we have in view, namely, the highest degree of malaria control consistent with a reasonably low per capita cost.

The Ultimate Seasonal Infection of Malarial Fever, with the Mosquito Carrier as the Indicator.—MAYNE (*Public Health Reports*, 1919, xxxv, 1969) believes that by the dissection of mosquitoes and the detection in this manner of those carrying malarial parasites it is possible to apply measures of protection more intelligently than otherwise. The following from the "Discussion and Summary" indicates the field of usefulness of the measure: "Protection against malarial fever through prophylactic means, afforded by a knowledge of the presence of infective organisms in the mosquito, is a measure placed at the disposal of the sanitarian. This is offered through biological research, using the insect host as an indicator. There is a date (differing for place and year) up to which time mosquitoes are infective and beyond which time they are not. After this date malaria is not contracted by man. A knowledge of terminal infection with the mosquito as an indicator has considerable sanitary value, and it can be applied in a practical way by using it as a guide in deciding on the discontinuance of sanitary protection at a time when the mosquito no longer plays a pathological role. It furnishes the basis for the determination, in a selected zone, of a time when it is safe to curtail sanitary-control measures. Thus, needless expenditures of public funds may be averted in such cases where such funds are limited to malaria control—where it is not the purpose to eradicate the mosquito merely as a pest. Applied practically, this indicator would operate in this manner: Assuming that November 1 was the date determined as that of ultimate mosquito infectibility, and it was desired to recommend the safe time at which to discontinue oiling or other larvicidal measures, allow eighteen days for complete transformation from the larval stage, and twelve days for the adult mosquito to become infective, a total of thirty days to be counted back from the date of ultimate infectibility. The date to be named for the safe discontinuance of operations against the mosquito as an infecting agency would then be October 1.

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All communications should be addressed to—

DR. GEORGE MORRIS PIERSOL, 1913 Spruce St., Philadelphia, Pa., U.S.A.